DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

UNIVERSAL HUMAN VALUES –
UNDERSTANDING HARMONY AND ETHICAL HUMAN CONDUCT

Program	Course	Course Name
B.Tech.	**DR23MCT01**	UNIVERSAL HUMAN

Course Objectives

- To help the students appreciate the essential complementary between 'VALUES' and 'SKILLS' to ensure sustained happiness and prosperity.
- To facilitate the development of a holistic perspective among students towards life and profession, based on the correct understanding of human reality and existence.
- To highlight implications of holistic understanding in terms of ethical human conduct, trustful behaviour, and mutually enriching interaction with nature.

Course Outcomes

- Define Natural Acceptance, Happiness, and Prosperity (L1, L2)
- Identify oneself and surroundings (family, society, nature) (L1, L2)
- Apply learnt concepts in daily life situations (L3)
- Relate human values with human relationships and society (L4)
- Justify the need for universal human values and harmonious existence (L5)
- Develop socially and ecologically responsible engineers (L3, L6)

UNIT I – Introduction to Value Education

1. Lecture 1: Right Understanding, Relationship and Physical Facility
2. Lecture 2: Understanding Value Education
3. Lecture 3: Self-exploration as the Process for Value Education
4. Lecture 4: Continuous Happiness and Prosperity
5. Lecture 5: Happiness and Prosperity – Current Scenario
6. Lecture 6: Method to Fulfill the Basic Human Aspirations

UNIT II – Harmony in the Human Being

7. Lecture 7: Human being as the Co-existence of self and body
8. Lecture 8: Needs of the self and the body
9. Lecture 9: Body as an instrument of the self
10. Lecture 10: Harmony in the self
11. Lecture 11: Harmony of the self with the body
12. Lecture 12: Self-regulation and Health

UNIT III – Harmony in the Family and Society

13. Lecture 13: Harmony in the Family
14. Lecture 14: Trust – the foundational value

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

15. Lecture 15: Respect – as the right evaluation
16. Lecture 16: Justice in relationships
17. Lecture 17: Harmony in the Society
18. Lecture 18: Vision for the Universal Human Order

UNIT IV – Harmony in Nature/Existence

19. Lecture 19: Harmony in Nature
20. Lecture 20: Interconnectedness and Mutual Fulfillment
21. Lecture 21: Existence as Co-existence
22. Lecture 22: Holistic Perception of Harmony

UNIT V – Implications of Holistic Understanding & Professional Ethics

23. Lecture 23: Natural Acceptance of Human Values
24. Lecture 24: Ethical Human Conduct
25. Lecture 25: Humanistic Education and Universal Human Order
26. Lecture 26: Professional Ethics
27. Lecture 27: Holistic Technologies and Models
28. Lecture 28: Strategies for Value-based Living

Program Name	Course code	Course Name
B.Tech.	R201114	Environmental Science

ENVIRONMENTAL SCIENCE

Learning Objectives:

The objectives of the course are to impart:

- Overall understanding of the natural resources.

- Basic understanding of the ecosystem and its diversity.

- Acquaintance on various environmental challenges induced due to unplanned anthropogenic activities.

- An understanding of the environmental impact of developmental activities.

- Awareness on the social issues, environmental legislation and global treaties.

UNIT-I:

Multidisciplinary nature of Environmental Studies: Definition, Scope and Importance – Sustainability: Stockholm and Rio Summit–Global Environmental Challenges: Global

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

warming and climate change, acid rains, ozone layer depletion, population growth and explosion, effects;. Role of information technology in environment and human health.

Ecosystems: Concept of an ecosystem. - Structure and function of an ecosystem; Producers, consumers and decomposers. - Energy flow in the ecosystem - Ecological succession. - Food chains, food webs and ecological pyramids; Introduction, types, characteristic features, structure and function of Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems.

UNIT-II:

Natural Resources: Natural resources and associated problems.

Forest resources: Use and over – exploitation, deforestation – Timber extraction – Mining, dams and other effects on forest and tribal people.

Water resources: Use and over utilization of surface and ground water – Floods, drought, conflicts over water, dams – benefits and problems.

Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources.

Food resources: World food problems, changes caused by non-agriculture activities-effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity.

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

Energy resources: Growing energy needs, renewable and non-renewable energy sources use of alternate energy sources.

Land resources: Land as a resource, land degradation, Wasteland reclamation, man induced landslides, soil erosion and desertification; Role of an individual in conservation of natural resources; Equitable use of resources for sustainable lifestyles.

UNIT-III:

Biodiversity and its conservation: Definition: genetic, species and ecosystem diversity-classification - Value of biodiversity: consumptive use, productive use, social-Biodiversity at national and local levels. India as a mega-diversity nation - Hot-sports of biodiversity - Threats to biodiversity: habitat loss, man-wildlife conflicts. - Endangered and endemic species of India – Conservation of biodiversity: conservation of biodiversity.

UNIT–IV:

Environmental Pollution: Definition, Cause, effects and control measures of Air pollution, Water pollution, Soil pollution, Noise pollution, Nuclear hazards. Role of an individual in prevention of pollution. - Pollution case studies, Sustainable Life Studies. Impact of Fire Crackers on Men and his well being.

Solid Waste Management: Sources, Classification, effects and control measures of urban and industrial solid wastes. Consumerism and waste products, Biomedical, Hazardous and e – waste management.

UNIT–V:

Social Issues and the Environment: Urban problems related to energy -Water conservation, rain water harvesting - Resettlement and rehabilitation of people; its problems and concerns. Environmental ethics: Issues and possible solutions. Environmental Protection Act -Air (Prevention and Control of Pollution) Act. –Water (Prevention and control of Pollution) Act -Wildlife Protection Act -Forest Conservation Act-Issues involved in enforcement of environmental legislation. -Public awareness.

Environmental Management: Impact Assessment and its significance various stages of EIA, preparation of EMP and EIS, Environmental audit. Ecotourism, Green Campus – Green business and Green politics.

The student should Visit an Industry / Ecosystem and submit a report individually on any issues

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

related to Environmental Studies course and make a power point presentation.

Text Books:

Environmental Studies, K. V. S. G. Murali Krishna, VGS Publishers, Vijayawada

1. Environmental Studies, R. Rajagopalan, 2nd Edition, 2011, Oxford University Press.

2. Environmental Studies, P. N. Palanisamy, P. Manikandan, A. Geetha, and K. Manjula Rani;

Pearson Education, Chennai

Reference:

1. Text Book of Environmental Studies, Deeshita Dave & P. UdayaBhaskar, Cengage

Learning.

2. A Textbook of Environmental Studies, Shaashi Chawla, TMH, New Delhi

3. Environmental Studies, Benny Joseph, Tata McGraw Hill Co, New Delhi

4. Perspectives in Environment Studies, Anubha Kaushik, C P Kaushik, New Age

International

Publishers, 2014

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

IPR & PATENTS

Objectives:

- To know the importance of Intellectual property rights, which plays a vital role in advanced Technical and Scientific disciplines.

- Imparting IPR protections and regulations for further advancement, so that the students can familiarize with the latest developments.

UNIT I: Introduction to Intellectual Property Rights (IPR)

Concept of Property - Introduction to IPR – International Instruments and IPR - WIPO - TRIPS – WTO -Laws Relating to IPR - IPR Tool Kit - Protection and Regulation - Copyrights and Neighboring Rights – Industrial Property – Patents - Agencies for IPR Registration – Traditional Knowledge –Emerging Areas of IPR - Layout Designs and Integrated Circuits – Use and Misuse of Intellectual Property Rights.

UNIT II: Copyrights and Neighboring Rights

Introduction to Copyrights – Principles of Copyright Protection – Law Relating to Copyrights - Subject Matters of Copyright – Copyright Ownership – Transfer and Duration – Right to Prepare Derivative Works –Rights of Distribution – Rights of Performers – Copyright Registration – Limitations – Infringement of Copyright – Relief and Remedy – Case Law - Semiconductor Chip Protection Act.

UNIT III: Patents

Introduction to Patents - Laws Relating to Patents in India – Patent Requirements – Product Patent and Process Patent - Patent Search - Patent Registration and Granting of Patent - Exclusive Rights – Limitations - Ownership and Transfer — Revocation of Patent – Patent Appellate Board - Infringement of Patent – Compulsory Licensing — Patent Cooperation Treaty – New developments in Patents – Software Protection and Computer related Innovations.

UNIT IV: Trademarks

Introduction to Trademarks – Laws Relating to Trademarks – Functions of Trademark – Distinction between Trademark and Property Mark – Marks Covered under Trademark Law -

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

Trade Mark Registration – Trade Mark Maintenance – Transfer of rights -   Deceptive

Similarities - Likelihood of Confusion - Dilution of Ownership – Trademarks Claims and

Infringement – Remedies – Passing Off Action.

UNIT V: Trade Secrets

Introduction to Trade Secrets – General Principles - Laws Relating to Trade Secrets -

Maintaining Trade Secret – Physical Security – Employee Access Limitation – Employee

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

IPR & PATENTS

Confidentiality Agreements – Breach of Contract –Law of Unfair Competition – Trade Secret Litigation – Applying State Law.

Unit VI: Cyber Law and Cyber Crime

Introduction to Cyber Law – Information Technology Act 2000 - Protection of Online and Computer Transactions - E-commerce - Data Security – Authentication and Confidentiality - Privacy - Digital Signatures – Certifying Authorities - Cyber Crimes - Prevention and Punishment – Liability of Network Providers.

• Relevant Cases Shall be dealt where ever necessary.

Outcome:

* IPR Laws and patents pave the way for innovative ideas which are instrumental for inventions to seek Patents.

*Student get an insight on Copyrights, Patents and Software patents which are instrumental for further advancements.

References:

1. Intellectual Property Rights (Patents & Cyber Law), Dr. A. Srinivas. Oxford University Press, New Delhi.

2. Deborah E.Bouchoux: Intellectual Property, Cengage Learning, New Delhi.

3. PrabhuddhaGanguli: Intellectual Property Rights, Tata Mc-Graw –Hill, New Delhi

4. Richard Stim: Intellectual Property, Cengage Learning, New Delhi.

5. Kompal Bansal &Parishit Bansal Fundamentals of IPR for Engineers, B. S. Publications (Press).

6. Cyber Law - Texts & Cases, South-Western"s Special Topics Collections.

7. R.Radha Krishnan, S.Balasubramanian: Intellectual Property Rights, Excel Books.

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

ESSENCE OF INDIAN TRADITIONAL KNOWLEDGE

Course Objectives:

- The course aims at imparting basic principles of thought process, reasoning and inferencing. Sustainability is at the core of Indian Traditional Knowledge Systems connecting society and nature.

- Holistic life style of Yogic-science and wisdom capsules in Sanskrit literature are also important in modern society with rapid technological advancements and societal disruptions.

- The course focuses on introduction to Indian Knowledge System, Indian perspective of modern scientific world-view and basic principles of Yoga and holistic health care system

Course Outcomes:

Upon successful completion of the course, the student will be able to:

- Understand the significance of Indian Traditional Knowledge

- Classify the Indian Traditional Knowledge

- Compare Modern Science with Indian Traditional Knowledge system.

- Analyze the role of Government in protecting the Traditional Knowledge

- Understand the impact of Philosophical tradition on Indian Knowledge System.

Unit I

Introduction to Traditional Knowledge: Define Traditional Knowledge- Nature and Characteristics- Scope and Importance- kinds of Traditional Knowledge- The historical impact of social change on Traditional Knowledge Systems- Value of Traditional knowledge in global economy.

Unit II

Basic structure of Indian Knowledge System: Astadash Vidya- 4 Ved - 4 Upaved (Ayurved, Dhanurved, GandharvaVed&Sthapthya Adi), 6 vedanga (Shisha, Kalppa, Nirukha,Vykaran, Jyothisha& Chand),4 upanga (Dharmashastra, Meemamsa, purana &Tharka Shastra).

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

Unit III

Modern Science and Indian Knowledge System-Indigenous Knowledge, Characteristics-

Yoga and Holistic Health care-cases studies.

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

Unit IV

Protection of Traditional Knowledge: The need for protecting traditional knowledge - Significance of Traditional knowledge Protection-Role of government to harness Traditional Knowledge.

Unit V

Impact of Traditions: Philosophical Tradition (Sarvadarshan) Nyaya, Vyshepec, Sankhya, Yog, Meemamsa, Vedantha, Chavanka, Jain &Boudh - Indian Artistic Tradition - Chitrakala, Moorthikala, Vasthukala ,Sthapthya, Sangeetha, Nruthya Yevam Sahithya

Reference Books :

1. Traditional Knowledge System in India, by AmitJha, 2009.

2. Traditional Knowledge System and Technology in India by Basanta Kumar Mohanta and Vipin Kumar Singh, PratibhaPrakashan 2012.

3. Siva Ramakrishnan (Ed.), Cultural Heritage of India-course material, BharatiyaVidya

4. Swami Jitatmanand, Holistic Science and Vedant, BharatiyaVidyaBhavan

5. Yoga Sutra of Patanjali, Ramakrishna Mission,Kolkata.

6. Pramod Chandra, India Arts, Howard Univ. Press,1983.

7. Krishna Chaitanya, Arts of India, Abhinav Publications,1987.

Web Resources:

1. https://www.wipo.int/wipo_magazine/en/2017/01/article_0004.html

2. http://iks.iitgn.ac.in/wp-content/uploads/2016/01/Indian-Knowledge-Systems-Kapil-Kapoor.pdf

3. ttps://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_21/wipo_grtkf_ic_21_ref_facilitators_text.pdf

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

Constitution of India

Course Objectives:

- To understand philosophy of fundamental rights and duties

- To understand the autonomous nature of constitutional bodies like Supreme Court and high court controller and auditor general of India and election commission of India.

- To understand the central and state relation financial and administrative.

UNIT-I

Introduction to Indian Constitution: Constitution meaning of the term, Indian Constitution - Sources and constitutional history, Features - Citizenship, Preamble, Fundamental Rights and Duties, Directive Principles of State Policy.

Learning outcomes:

After completion of this unit student will

● Understand the concept of Indian constitution

● Apply the knowledge on directive principle of state policy

● Analyze the History, features of Indian constitution

● Evaluate Preamble Fundamental Rights and Duties

UNIT-II

Union Government and its Administration Structure of the Indian Union: Federalism, Centre-State relationship, President: Role, power and position, PM and Council of ministers, Cabinet and Central Secretariat, LokSabha, RajyaSabha, The Supreme Court and High Court: Powers and Functions;

Learning outcomes:-After completion of this unit student will

● Understand the structure of Indian government

● Differentiate between the state and central government

● Explain the role of President and Prime Minister

● Know the Structure of supreme court and Highcourt

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

UNIT-III

State Government and its Administration Governor - Role and Position - CM and Council of ministers, State Secretariat: Organisation, Structure and Functions

Learning outcomes:-After completion of this unit student will

● Understand the structure of state government

● Analyze the role Governor and Chief Minister

● Explain the role of state Secretariat

● Differentiate between structure and functions of state secretariat

UNIT-IV

A.Local Administration - District"s Administration Head - Role and Importance, Municipalities - Mayor and role of Elected Representative - CEO of Municipal Corporation PachayatiRaj: Functions PRI: Zila Panchayat, Elected officials and their roles, CEO Zila Panchayat: Block level Organizational Hierarchy - (Different departments), Village level

- Role of Elected and Appointed officials - Importance of grass root democracy

Learning outcomes:-After completion of this unit student will

● Understand the local Administration

● Compare and contrast district administration role and importance

● Analyze the role of Myer and elected representatives of Municipalities

● Evaluate Zilla panchayat block level organisation

UNIT-V

Election Commission: Election Commission- Role of Chief Election Commissioner and Election Commissionerate State Election Commission:, Functions of Commissions for the welfare of SC/ST/OBC and women

Learning outcomes:-After completion of this unit student will

● Know the role of Election Commission apply knowledge

● Contrast and compare the role of Chief Election commissioner and Commissiononerate

● Analyze role of state election commission

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

● Evaluate various commissions of viz SC/ST/OBC and women

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

References:

1. Durga Das Basu, Introduction to the Constitution of India, Prentice – Hall of India Pvt.Ltd.. New Delhi

2. SubashKashyap, Indian Constitution, National Book Trust

3. J.A. Siwach, Dynamics of Indian Government & Politics

4. D.C. Gupta, Indian Government and Politics

5. H.M.Sreevai, Constitutional Law of India, 4th edition in 3 volumes (Universal Law Publication)

6. J.C. Johari, Indian Government andPolitics Hans

7. J. Raj IndianGovernment and Politics

8. M.V. Pylee, Indian Constitution Durga Das Basu, Human Rights in Constitutional Law, Prentice – Hall of India Pvt.Ltd.. New Delhi

9. Noorani, A.G., (South Asia Human Rights Documentation Centre), Challenges to Civil Right), Challenges to Civil Rights Guarantees in India, Oxford University Press 2012

Resources:

1. nptel.ac.in/courses/109104074/8

2. nptel.ac.in/courses/109104045/

3. nptel.ac.in/courses/101104065/

4. www.hss.iitb.ac.in/en/lecture-details

5. www.iitb.ac.in/en/event/2nd-lecture-institute-lecture-series-indian-constitution

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

PROFESSIONAL ETHICS & HUMAN VALUES

Preamble:

This course is a mandatory course introduced to impart the Ethics and Human Values to the students in engineering education.

Course Objectives:

- To create an awareness on Engineering Ethics and Human Values.
- To instill Moral and Social Values and Loyalty
- To appreciate the rights of others
- To create awareness on assessment of safety and risk

UNIT -I

Human Values:

Morals, Values and Ethics-Integrity-Work Ethic-Service learning – Civic Virtue – Respect for others –Living Peacefully –Caring –Sharing –Honesty -Courage-Cooperation– Commitment – Empathy –Self Confidence Character –Spirituality.

Learning outcomes:

1. Learn about morals, values & work ethics.

2. Learn to respect others and develop civic virtue.

3. Develop commitment

4. Learn how to live peacefully

UNIT -II

Engineering Ethics:

Senses of „Engineering Ethics-Variety of moral issued –Types of inquiry –Moral dilemmas – Moral autonomy –Kohlberg‟s theory-Gilligan‟s Theory-Consensus and controversy –Models of professional roles-Theories about right action-Self-interest -Customs and religion –Uses of

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

Ethical theories –Valuing time –Cooperation –Commitment.

Learning outcomes:

1. Learn about the ethical responsibilities of the engineers.

2. Create awareness about the customs and religions.

3. Learn time management

4. Learn about the different professional roles.

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

UNIT -III

Engineering as Social Experimentation:

Engineering As Social Experimentation –Framing the problem –Determining the facts – Codes of Ethics –Clarifying Concepts –Application issues –Common Ground -General Principles – Utilitarian thinking respect for persons.

Learning outcomes:

1. Demonstrate knowledge to become a social experimenter.

2. Provide depth knowledge on framing of the problem and determining the facts.

3. Provide depth knowledge on codes of ethics.

4. Develop utilitarian thinking

UNIT -IV

Engineers Responsibility for Safety and Risk:

Safety and risk –Assessment of safety and risk –Risk benefit analysis and reducing risk-Safety and the Engineer-Designing for the safety-Intellectual Property rights (IPR).

Learning outcomes:

1. Create awareness about safety, risk & risk benefit analysis.

2. Engineer's design practices for providing safety.

3. Provide knowledge on intellectual property rights.

UINIT- V

Global Issues:

Globalization –Cross-culture issues-Environmental Ethics –Computer Ethics –Computers as the instrument of Unethical behavior –Computers as the object of Unethical acts – Autonomous Computers-Computer codes of Ethics –Weapons Development -Ethics and Research –Analyzing Ethical Problems in research.

Learning outcomes:

1. Develop knowledge about global issues.

2. Create awareness on computer and environmental ethics

3. Analyze ethical problems in research.

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in

4. Give a picture on weapons development.

Course outcomes:

Students will be able to:

● Identify and analyze an ethical issue in the subject matter under investigation or in a relevant field

● Identify the multiple ethical interests at stake in a real-world situation or practice

● Articulate what makes a particular course of action ethically defensible

● Assess their own ethical values and the social context of problems

● Identify ethical concerns in research and intellectual contexts, including academic integrity, use and citation of sources, the objective presentation of data, and the treatment of human subjects

● Demonstrate knowledge of ethical values in non-classroom activities, such as service learning, internships, and field work

● Integrate, synthesize, and apply knowledge of ethical dilemmas and resolutions in academic settings, including focused and interdisciplinary research.

Text Books:

1) "Engineering Ethics includes Human Values" by M.Govindarajan, S.Natarajan and, V.S.Senthil Kumar-PHI Learning Pvt. Ltd-2009

2) "Engineering Ethics" by Harris, Pritchard and Rabins, CENGAGE Learning, India Edition, 2009.

3) "Ethics in Engineering" by Mike W. Martin and Roland Schinzinger –Tata McGraw-Hill–2003.

4) "Professional Ethics and Morals" by Prof.A.R.Aryasri, DharanikotaSuyodhana-Maruthi Publications.

5) "Professional Ethics and Human Values" by A.Alavudeen, R.KalilRahman and M. Jayakumaran, Laxmi Publications.

6) "Professional Ethics and Human Values" by Prof.D.R.Kiran-"Indian Culture, Values and Professional Ethics" by PSR Murthy-BS Publication

DADI INSTITUTE OF ENGINEERING &TECHNOLOGY

An Autonomous Institute

Approved by AICTE & Permanently affiliated to JNTU GV

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: www.diet.edu.in, 9963993229 E-mail:, principal@diet.edu.in